

Search for heavy Higgs decaying to two tau leptons with the ATLAS detector using pp collision at $\sqrt{s} = 13$ TeV

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This talk will cover the latest result of searching for heavy Higgs decaying to two tau leptons with the ATLAS full Run2 datasets using pp collision at $\sqrt{s} = 13$ TeV. This search is performed over the mass range of 0.2-2.5 TeV and the two τ leptons decay is considered, where at least one τ decays leptonically. This channel is sensitive at high $\tan\beta$ value according to hMSSM and other 2HDMs, where $\tan\beta$ is the ratio of the vacuum expectation values of the two Higgs. The results of this search show that most of the parameter space of hMSSM is excluded with 95% CL.

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